

CLAIMS

What is claimed is:

1. A method of dynamically generating an electronic document, the method comprising the steps of:
 - receiving a request to generate an electronic document containing information responsive to a user query based on one or more information objects that are organized in one or more hierarchical trees, wherein the query contains a concept and an information type;
 - searching a cache of information objects to identify one or more rows that match the query concept and the query information type;
 - determining an intersection of the rows, yielding a result set of rows;
 - retrieving matching information objects based on following index pointers in the rows of the result set;
 - automatically creating the electronic document using the matching information objects and delivering the electronic document in response to the user query.
2. A method as recited in claim 1, wherein the step of searching a cache comprises the steps of:
 - searching a result cache for a result row that is associated with a matching concept and matching information type;
 - if searching the result cache yields no cache hits, searching a content cache of information objects for a first set of interim result rows having a matching associated concept and a second set of interim result rows having a matching associated information type.

9 3. A method as recited in claim 1, wherein the hierarchical trees comprise a concept tree
10 and a technology tree, and wherein each tree is organized as a vocabulary node having one or
11 more relation types, wherein each relation type has one or more relation instances, wherein
12 each relation instance has one or more relation participants, and wherein each relation
13 participant is associated with one or more information objects.

1 4. A method as recited in claim 1, further comprising the step of caching the result set of
2 rows in the result cache.

1 5. A method as recited in claim 1, further comprising the step of providing the
2 information objects to a delivery engine that generates the electronic document based on the
3 information objects and delivers the electronic document in response to the user query.

1 6. A method as recited in claim 1, further comprising the steps of:
2 receiving the user query at a distributed cache manager;
3 selecting one of a plurality of information object cache servers to process the user
4 query and generate the electronic document;
5 forwarding the user query to the selected one of the plurality of information object
6 cache servers.

1 7. A method as recited in claim 1, further comprising the steps of:
2 receiving the user query from a delivery engine at a distributed cache manager;
3 selecting one of a plurality of information object cache servers to process the user
4 query and generate the electronic document;
5 forwarding the user query to the selected one of the plurality of information object
6 cache servers;
7 providing the information objects to a delivery engine that generates the electronic
8 document based on the information objects and delivers the electronic
9 document in response to the user query.
1

- 1 8. A computer-readable medium carrying one or more sequences of instructions for
2 dynamically generating an electronic document, which instructions, when executed by one or
3 more processors, cause the one or more processors to carry out the steps of:
4 receiving a request to generate an electronic document containing information
5 responsive to a user query based on one or more information objects that are
6 organized in one or more hierarchical trees, wherein the query contains a
7 concept and an information type;
8 searching a cache of information objects to identify one or more rows that match the
9 query concept and the query information type;
10 determining an intersection of the rows, yielding a result set of rows;
11 retrieving matching information objects based on following index pointers in the rows
12 of the result set;
13 automatically creating the electronic document using the matching information
14 objects and delivering the electronic document in response to the user query.
- 1 9. An apparatus for dynamically generating an electronic document, comprising:
2 means for receiving a request to generate an electronic document containing
3 information responsive to a user query based on one or more information
4 objects that are organized in one or more hierarchical trees, wherein the query
5 contains a concept and an information type;
6 means for searching a cache of information objects to identify one or more rows that
7 match the query concept and the query information type;
8 means for determining an intersection of the rows, yielding a result set of rows;
9 means for retrieving matching information objects based on following index pointers
10 in the rows of the result set;
11 means for automatically creating the electronic document using the matching
12 information objects and delivering the electronic document in response to the
13 user query.

1 10. A computer system for dynamically generating an electronic document, the system
2 comprising:
3 a computer-readable medium for storing a plurality of information chunks in a content
4 cache, each chunk of the plurality of information chunks retrieved by a
5 directory address; and a plurality of data structures describing atomic concepts
6 among names in an enterprise-specific vocabulary and a plurality of data
7 structures describing relationships among the atomic concepts in a concept
8 cache; and
9 one or more processors configured as an interface for managing the plurality of
10 information chunks in the content cache, managing the plurality of data
11 structures in the concept cache, and arranging content on the Web page based
12 at least in part on data in the concept cache;
13 one or more sequences of instructions in the computer-readable medium, which
14 instructions, when executed by the one or more processors, cause the one or
15 more processors to carry out the steps of:
16 receiving a request to generate an electronic document containing information
17 responsive to a user query based on one or more information objects
18 that are organized in one or more hierarchical trees, wherein the query
19 contains a concept and an information type;
20 searching a cache of information objects to identify one or more rows that
21 match the query concept and the query information type;
22 determining an intersection of the rows, yielding a result set of rows;
23 retrieving matching information objects based on following index pointers in
24 the rows of the result set;
25 automatically creating the electronic document using the matching information
26 objects and delivering the electronic document in response to the user
27 query.